



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/659,241	09/11/2000	William Kopaciewicz	MCA-463	4651

7590
Kevin S. Lemack
Nields & Lemack
176 E. Main Street
Suite 8
Westboro, MA 01581

09/08/2003

EXAMINER

LUDLOW, JAN M

ART UNIT	PAPER NUMBER
----------	--------------

1743

DATE MAILED: 09/08/2003

57

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/659,241

Applicant(s)

KOPACIEWICZ ET AL.

Examiner

Jan M. Ludlow

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 31-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 and 31-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) Paper No(s). <u>18</u> |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

Art Unit: 1743

1. In view of the amendment and arguments filed on February 20, 2003, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below. The amendment filed February 20, 2003 has been entered.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

3. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

5. Determining the scope and contents of the prior art.
6. Ascertaining the differences between the prior art and the claims at issue.
7. Resolving the level of ordinary skill in the pertinent art.
8. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 1743

10. Claims 1-20, 22-24, 31-34 are rejected under 35 U.S.C. 103(a) as being obvious over Fernwood et al. in view of Robertson and/or Moring, further in view of Tate et al and/or Schlör et al and/or Groteke.

11. Fernwood teaches a device having sample reservoirs 12, collection reservoirs 20, filtration substrate 13, and spouts 41 all fixed together by screws 26 and latches 30.

The substrate 13 can be the same size as shown, but be a non-porous sheet with porous circular regions corresponding to reservoirs 12 (col. 3, lines 25-30). If the

substrate is the same size as shown, then the filter portions are of the same thickness as the rest of the sheet, i.e., it would have been obvious to make the filter regions the same thickness as the non-porous sheet in order to make the alternative embodiment sheet 13 the same size as the sheet shown as taught by Fernwood. The non-porous portion of the sheet constitutes the instant housing. The filter regions can be adsorbents (col. 1, line 26) and exemplary filters are Teflon or Teflon with diatomaceous earth bound thereto (col. 5, line 66, col. 6, line 54). It is the examiner's position that adsorbent filters are inherently "functionalized" to be adsorbent. To the extent that the membranes taught by Fernwood are not inherently functionalized to be adsorbent, it would have been obvious to use functionalized adsorbent membranes in order to use known adsorbent membranes as taught. It is the examiner's position that the diatomaceous earth particles are entrapped in the porous matrix because they are bound. With respect to "self-retaining" in that Fernwood teaches that the porous regions are "contained" in the non-porous sheet, it is the examiner's position that they do not fall out. The surfaces of the non-porous sheet surrounding the porous portions constitute

Art Unit: 1743

the instant solid walls. The membrane may be formed of any of a variety of materials (col. 5, lines 45-52).

12. Fernwood fails to teach the instant aspect ratio or adhesion.

13. Robertson teaches a filter useful in a device similar to that of Fernwood having a thickness of 0.005-0.020 inches across a well of 0.28 inches diameter (col. 4, lines 28-29 and 60-65), for an aspect ratio of 14-56.

14. Moring teaches a filter useful in a device similar to that of Fernwood having a diameter of 6.88 mm and a thickness of 950 μm (col. 16, lines 60-65), for an aspect ratio of 7.24.

15. Tate et al and/or Schlör et al and/or Groteke each teach containing a filter in a frame or support by adhesion, such as gluing or cementing in place.

16. It would have been obvious to use porous circles in the apertures of the non-porous sheet of Fernwood having an aspect ratio under 20, such as 7.24 or 14-20, in order to use typical filters used in multiwell filtrations as taught by Moring and Robertson. It would have been further obvious to retain the porous portions in the non-porous sheet by adhesion in order to retain the filters in a support by conventional means as taught by Tate et al and/or Schlör et al and/or Groteke.

17. Alternatively, claims 2, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fernwood in view of Moring and/or Robertson and further in view of Tate et al and/or Schlör et al and/or Groteke as applied to claims 1, 9 above, and further in view of Foltz.

Art Unit: 1743

18. Fernwood fails to explicitly teach that the diatomaceous earth particles are “entrapped” in the filter matrix.

19. Foltz teaches entrapment of adsorbent particles in filter matrixes to effect separation.

20. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use filters with entrapped adsorptive particles in order to provide a known type of adsorptive filter as taught by Foltz.

21. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fernwood in view of Moring and/or Robertson and further in view of Tate et al and/or Schlör et al and/or Groteke as applied to claims 17-19 above, and further in view of Bowers et al.

22. Fernwood fails to teach the sample reservoir and spout plate bonded to the filter substrate.

23. Bowers teaches a filtration system with sample reservoirs and an underdrain tray having spouts. The sample reservoirs are bonded to the underdrain tray with the filter 70 therebetween (col. 6, lines 1-11, Figure 10).

24. It would have been obvious to one of ordinary skill in the art at the time the invention was made to bond the drain, filter and sample reservoirs of Fernwood together in order to provide hermetic sealing as taught by Bowers, if one were willing to forego the advantages of reusing the reservoir and drain plate with a new filter medium.

25. Applicant's arguments with respect to claims 1-24, 31-34 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 1743

26. Note that Root ('564) teaches a filter held within a housing 120 by adhesion to a well bottom, but does not teach that the filters are "self-retaining" in that the wells are required to hold the filters in the housing. Note also that the well structure does not constitute the instant housing because the filters are not contained in the apertures, but welded below them. Note that Manns ('215) does not teach the instant solid walls (see figures 6-7 in which the walls have a gap or slit into which the filter penetrates). Note that Matkovich teaches a housing 21 surrounding porous elements 13, 17, but that the walls are not described as solid, but rather a dense and somewhat compacted liquophobic boundary formed from heated and compressing the porous elements (col. 11, lines 24, 40-45).

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jan M. Ludlow whose telephone number is (703) 308-4039. The examiner can normally be reached on Monday-Thursday, 11:30 am - 8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (703) 308-4037. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Jan M. Ludlow
Primary Examiner
Art Unit 1743

Jml
August 24, 2003